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British Society for the History of Pharmacy
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British Society for the History of Pharmacy

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The British Society for the History of Pharmacy was formed in 1967 under the aegis of the Pharmaceutical Society of Great Britain, having originated from its History of Pharmacy Committee.

BSHP seeks to act as a focus for the development of all areas of the history of Pharmacy, from the works of the ancient apothecary to today's ever changing role of the community, hospital, wholesale or industrial pharmacist. Membership is open to all interested in the aims of BSHP.

Aims

Promotion of historical studies related to pharmacy.
Advancement of knowledge and propagation of understanding of the history of pharmacy.
Publication of the research work of pharmaceutical historians.
Preservation of pharmaceutical artefacts and historic pharmacies.
Support for the work of relevant museums and offering advice on establishment of other pharmaceutical exhibits and on the preservation of pharmacies.
Co-operation with related professions and local historians on medico-pharmaceutical topics of mutual interest.

Pharmaceutical Historian

The *Pharmaceutical Historian* has been published since 1967, at first intermittently, but on a regular quarterly basis from 1972. Issues generally comprise 16 or 20 pages and cover.

An **index** for the years 1967-1995 was published in 1998, for 1996-2000 in 2000, for 2001-2005 in December 2005, for 2006-2010 in December 2010 and 2011-2015 in December 2015. They can be viewed on the website.

Papers, short communications and letters in English on any aspect of the history of pharmacy are welcome and should be sent to the address above or by email to *editor@bshp.org*

Any illustrations are converted to monochrome for printing. Further details of requirements can be found on the website *www.bshp.org* under Publications.

Membership

Membership costs £20.00 per annum and includes:

Four issues of the *Pharmaceutical Historian.*

Regular meetings, with guest speakers, usually in November, February and May.

Visits to places of historic interest, museums, collections, botanical gardens, etc.

Annual Conference, usually in March/April.

Free use of the Royal Pharmaceutical Society of Great Britain's library facilities for research.

Help in historical research and with the identification of artefacts.

Affiliation to the International Society for the History of Pharmacy (ISHP).

Affiliation to the British Society for the History of Medicine (BSHM).

Application forms are available from the Honorary Secretary at the address above or on *www.bshp.org*

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Diary

Please note the changed addresses for the meetings.

Monday 10 October 2016
'Expedition medicine' by Dr Henry Guly, retired consultant in emergency medicine, at UCL School of Pharmacy, 29-39 Brunswick Square, London WC1N 1AX, 5.00 for 5.30.
Nearest tube Russell Square.

Monday 7 November 2016
Joint meeting at School of Pharmacy,
University of Bradford.
Details to be circulated.

Future dates:
Mondays at UCL School of Pharmacy,
29-39 Brunswick Square, London WC1N 1AX.
6 February 2017;
15 May 2017;
9 October 2017

BSHP has its own **Facebook** page. 'Like' us to share information on events, news items, resources, research and other pharmacy history topics from BSHP and related organisations.

BSHP Annual Spring Conference 2017

50th Anniversary of BSHP

To be held in London on Saturday 1st and Sunday 2nd April 2017

The usual format of our conference is changed slightly for this our celebration of 50 years. The Saturday sessions will be held at the new Headquarters of the Royal Pharmaceutical Society at 66-68 East Smithfield, London E1W 1AW.

The Saturday evening Celebration Dinner and Sunday morning sessions, including the Annual General Meeting, will be held at the 'DoubleTree by Hilton Hotel', Marble Arch, London W1H 7BY. Application forms offering a variety of attendance opportunities will be available shortly. We hope that the central location and general interest lecture topics will attract non-members and we would welcome your assistance in promoting the conference widely.

Contributions will be by invited speakers on the history of BSHP and related organisations followed by the opportunity to explore the Society's Museum and Library. The new format means that we will not be calling for papers from members this year but posters illustrating the work of members and students will be very welcome. We will revert to the usual format in 2018.

If you have topics you would like to present for our 2018 conference, please get in touch to reserve a place in the programme.

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The First Hundred Years of Western Pharmacy in Colonial Hong Kong (1841-1940)

Patrick Chiu

Hong Kong

Introduction

In the second half of the nineteenth century and first few decades of the twentieth century, Hong Kong, located on the South China coast with a deep water harbour, served as a free trade centre. It earned part of its revenue by re-exporting opium to the Chinese Mainland and serving as a ship-building and ship-repairing centre. Its role at the time attracted traders and opportunists from many parts of the world.

Western dispensaries served two functions in the nineteenth century in colonial Hong Kong: a medical clinic serviced by a surgeon and as an apothecary who sold drugs and sundries to expatriate traders and sailors. The dispensary manager often served as the apothecary but was not necessarily a qualified chemist and druggist. Junior drug sales persons were called dispensers. These applied to both public hospitals and also retail pharmacies. This situation continued until the sales of poisons were regulated in 1903 by the Poisons Bye-law of the Public Health and Buildings Ordinance, when only qualified chemists and druggists were allowed to undertake such trade.[1]

After one hundred years of colonial rule in 1938, 87% of patients attending out-patient clinics at Chinese hospitals still preferred traditional medicine and pharmacy. However, it is interesting to note that two-thirds of in-patients at the same hospitals received western medicine and pharmacy in the same year.

This article seeks to explore the key factors in the development of western pharmacy in the community and hospital sectors and the impact of pharmacy legislation in the local sales of poisons and dangerous drugs, and training of local chemists and druggists in the one hundred year period (1841-1940) in Hong Kong.

Hong Kong in the 1840s

In 1841 Hong Kong was a fishing port with around twenty villages and a few thousand residents under the jurisdiction of Xin An County of Guangdong province (previously known as Kwangtung in English). Capt. Elliot, Chief Superintendent of British Trade in China, declared the occupation of Hong Kong Island on 26th January 1841, soon after the end of the first Anglo-Chinese War (commonly known as the First Opium War) between the Qing Government of China and the United Kingdom. Hong Kong was ceded to the United Kingdom under the Treaty of Nanjing on 29th August, 1842.[2]

Demographics, Policy and Indigenous Pharmacy Practice

The period 1841 to 1940 was a turbulent era of transition from the late Qing Imperial Dynasty to the young Republican Government in the Mainland; it was also the period during which the newly founded Colonial Government in Hong Kong faced many challenges. The local population in Hong Kong increased from 5,650 in 1841 to 1.8 million (including 24,145 British and foreigners or 2% of the total population) in 1940, an almost two hundred-fold increase over a century (Table 1). Jik-Joen Lee in his paper noted that:

> In the latter half of the 19th century and the first half of the 20th century, many poor, single, young, physically strong men from neighbouring provinces, notably from Guangdong, moved to Hong Kong.[3]

With an open border, migrant workers in the Mainland provided a convenient source of labour to fuel industrial and commercial development of Hong Kong. Three waves of influx of migrants into Hong Kong from the southern provinces, in particular Guangdong, were notable. The first wave of migrants was from 1841 to 1864 soon after the two Opium Wars (first from 1839-42, second from 1856-60) and the Taiping Rebellion in the southern provinces of China during 1850-1864. By 1864, Hong Kong's population reached a peak of 125,504, including 4,007 British and foreign residents.

The second wave was from 1901 to 1911 when the Mainland was marred with instability brought about by a popular uprising, the eventual toppling of the

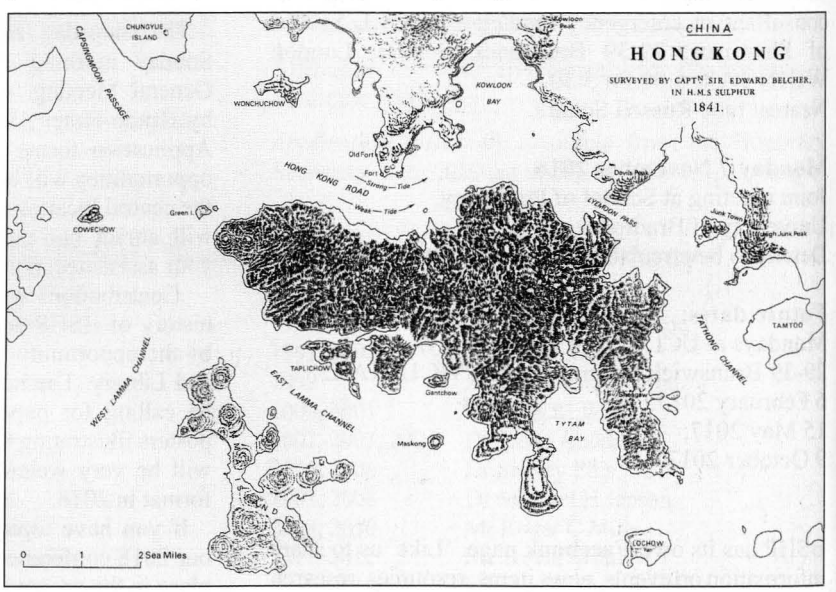

Figure 1. Map of Hong Kong Surveyed by Capt. Sir Edward Belcher in HMS Sulphur, 1841.

http://dx.doi.org/10.24355/dbbs.084-201801041501

Table 1: Population Growth of Hong Kong, 1841-1940.[4,5]

Year	British, and Other Nationalities (Excluding Military Personnel)	Chinese	Total
1841	n/a	5,650	5,650
1861	2,986	116,335	119,321
1881	9,721	150,690	160, 402
1891	10,446	210,995	221,441
1901	15,434	274,543	289,978
1911	11,225	438,873	450,098
1921	14,100	571,780	585,880
1931	19,540	830,210	849,750
1940	24,125	1,797,766 (Including an estimated 750,000 refugees)	1,821,891

Qing Dynasty and the founding of the Republic of China in 1911. Population again grew from 206,162 in 1901 to 450,739 (including 11,225 British and foreign residents) in 1911.

The third wave was the outbreak of the Anti-Japanese War in the 1930s in the Mainland which triggered an exodus, and the population increased from 849,750 in 1931 to 1.82 million (including 24,125 British and foreign residents and an estimated 750,000 refugees) in 1940.

A breakeven fiscal budget was the aim from the beginning when Colonial Hong Kong was founded in the 1840s. The laissez-faire policy adopted by the Colonial Government in Hong Kong, with free market enterprise, few regulations and limited support to the business community, worked well for Hong Kong as a free trade centre for re-export of opium to third countries. According to one observer:

> The simple and low-burden tax system development had a tremendous impact on the colonial government's subsequent social and economic.[6]

According to the *Hong Kong Almanack 1848*, eighteen herbal druggists were in practice, along with six western druggists. The herbal druggists were Traditional Chinese Medicine (TCM) doctors who attended to the health needs of local residents and normally learnt through studentship from TCM masters. TCM was regarded as a local custom and not a scientific discipline by the Colonial Government during its rule until 1997, when Hong Kong's sovereignty reverted back to China.

According to the history of Tung Wah Hospitals:

> A group of earnest Chinese community leaders proposed to raise funds … The first Chinese hospital in Hong Kong was finally built in 1870 … The hospital, named 'Tung Wah Hospital' was constructed in 1872 and started to provide free Chinese medicine services to the sick and poor.[7]

After the bubonic plague in 1894, the Chinese hospital started to provide western medicine and pharmacy services with subsidy from the Colonial Government, in parallel to TCM. In 1938, almost a century after introduction of western pharmacy, attendances at TCM out-patient clinics at the Chinese hospitals, funded mainly by philanthropists or private donors, remained high with 597,225 patients. This was almost 1.8 times more than the Government hospitals, with the latter providing western medicine and pharmacy service to only 327,768 patients.[8]

However, in the same year, in-patient admissions at the Chinese hospitals were 12,495, of which one-third opted for TCM treatment, versus 20,117 admissions at Government Hospitals which only provided western treatment, reflecting the trend of local in-patients gradually accepting western pharmacy and treatment. This could be partially explained by the fact that western doctors were funded by the Colonial Government whereas TCM doctors were not.[9]

The relative dominance of western medicine in the Colony may be explained as a government strategy. Pratik Chakrabarti offered the following view:

> European hospitals, drugs such as quinine, vaccines, European medical colleges – which offered people Western medical degrees and recognized only Western medicine – became dominant with the spread of colonial influence and power. As Europeans collected medical specimens from the tropics from the seventeenth century, they often extracted the materials used in the local drugs for their own medicines, but discouraged the adoption of those traditional medicines. They instead introduced and encouraged among Europeans and the locals the use of their own medicines … European colonial authorities controlled medical universities, degrees and licensing. These often linked to the marginalisation of traditional forms of medicine.[10]

For pharmacies, governance was non-existent until the middle of the 19th century. Dispensaries set up by private practice surgeons in partnership with merchants in the 1840s were free to operate without any control until 1858.

An experienced drug salesman was usually the manager of the dispensary looking after the sales of medicine and the title used was 'Apothecary'. Junior drug sales persons were called dispensers.

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These applied to both public hospitals and also retail pharmacies until the Colonial Government appointed Hugh McCallum, a qualified pharmaceutical chemist, as the first Apothecary and Analyst in Hong Kong in November 1879.

Other Challenges

Morbidities and mortalities in Hong Kong were unusually high among the early British colonial settlers, in particular military personnel, due to diarrhoea, dysentery and malaria. Malaria was the main cause particularly in the early 1840s with the damp marshes and collections of stagnant water in the hot and humid summer months. As reported in the English press at the time:

> Its diseases are endemic fever, diarrhoea and dysentery ... The British Commander, General D'Aguilar, has declared that to retain Hong Kong will require the loss of a whole regiment every three years ... The graveyard was soon filled and another was required from the Surveyor General, who found it difficult to point out a proper spot.[11]

There were no exceptions for medical personnel and four out of eight Colonial Surgeons in Hong Kong died at work from various illness from 1847-1873.[12] In May 1894, the bubonic plague erupted in Hong Kong, resulting in 93.4% mortality or 2,447 deaths in that year, excluding many who were sent straight to the burial ground. Eradication of bubonic plague occurred thirty five years later in 1930 with a cumulative total of 24,193 fatal cases recorded since 1894.[13]

Tropical Cyclones had also struck severe blows to the young Colony:

> Deaths and losses caused by the Typhoon of 22nd and 23rd of September, 1874 on the Island of Hong Kong and British Kowloon ... the bodies of seventeen Europeans and 6,904 Chinese have been recovered by the Police, and buried by them, or by friends of the deceased. ... the number of bodies recovered in all probability represents only one-third of the actual loss.[14]

Laws Governing Chemists and Druggists, Sales of Poisons, Dangerous Drugs and Medicines

Almost all laws in Hong Kong were local adaptations of the original English Acts to ensure that the same system of governance was in place in its Colonies. The first known piece of legislation was the Ordinance for Licensing and Regulating the Sale of Prepared Opium in 1858 for:

> Preparing or selling prepared opium bona fide for medicinal purposes by a medical practitioner, chemist or druggist having a European or American diploma.[15]

This was followed by the revision of the Jury List 1864 which provided that:

> Chemists and Druggists should be exempted from serving as Jurors, and such names on the List were accordingly struck out.[16]

The Spirit Licences Ordinance 1886 provided that:

> It shall be lawful for the Colonial Secretary to issue a licence free of all charge to any Apothecary, Chemist, or Druggist applying for the same, to keep and use on his premises, a still not more than eight gallons contents for the purpose of his trade only ...[17]

The Public Health and Buildings Ordinance 1903 provided that:

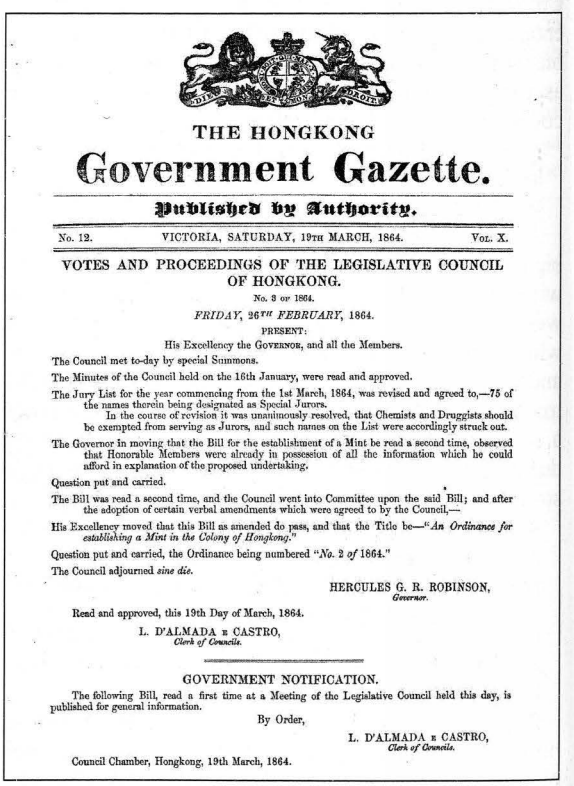
> Chemists and Druggists duly qualified under the English Pharmacy Act 1868 are exempted from the operations of Bye-laws ... when the article sold is an ingredient of any medicine dispensed by them.[18]

The Pharmacy Ordinance 1908 was the first locally passed law that had lasting impact and Schedule 3 of the Chemists and Druggists duly qualified under the English Pharmacy Act of 1868 are exempted from the operations of the ordinance provided protection of titles and restrictions on sales of poisons:

> No person shall sell or keep an open shop for retailing, dispensing or compounding poisons or shall take use or exhibit the name or title of Chemist and Druggist or Chemist or Druggist, unless such person is a duly registered Pharmaceutical Chemist or Chemist and Druggist under the Act of the Imperial Parliament styled "The Pharmacy Act 1868" and registered under this Ordinance ... or has been duly registered in the manner hereinafter provided.[19]

Schedule 4 of the ordinance authorised registration in certain cases:

> When any person who at the time of the passing of this Ordinance is in the practice as a Chemist and Druggist and has satisfied the Governor of his skill and competency to conduct the business of a Chemist and Druggist ... The Governor may cause such person to be duly registered as a Pharmaceutical Chemist or Chemist and Druggist.



THE HONGKONG

Government Gazette.

Published by Authority.

No. 12. VICTORIA, SATURDAY, 19TH MARCH, 1864. Vol. X.

VOTES AND PROCEEDINGS OF THE LEGISLATIVE COUNCIL OF HONGKONG.

No. 3 of 1864.

FRIDAY, 26TH FEBRUARY, 1864.

PRESENT:

His Excellency the GOVERNOR, and all the Members.

The Council met to-day by special Summons.

The Minutes of the Council held on the 16th January, were read and approved.

The Jury List for the year commencing from the 1st March, 1864, was revised and agreed to,—75 of the names therein being designated as Special Jurors.

In the course of revision it was unanimously resolved, that Chemists and Druggists should be exempted from serving as Jurors, and such names on the List were accordingly struck out.

The Governor in moving that the Bill for the establishment of a Mint be read a second time, observed that Honorable Members were already in possession of all the information which he could afford in explanation of the proposed undertaking.

Question put and carried.

The Bill was read a second time, and the Council went into Committee upon the said Bill; and after the adoption of certain verbal amendments which were agreed to by the Council,—

His Excellency moved that this Bill as amended do pass, and that the Title be—"*An Ordinance for establishing a Mint in the Colony of Hongkong.*"

Question put and carried, the Ordinance being numbered "*No. 2 of* 1864."

The Council adjourned *sine die*.

HERCULES G. R. ROBINSON,
Governor.

Read and approved, this 19th Day of March, 1864.

L. D'ALMADA E CASTRO,
Clerk of Councils.

GOVERNMENT NOTIFICATION.

The following Bill, read a first time at a Meeting of the Legislative Council held this day, is published for general information.

By Order,

L. D'ALMADA E CASTRO,
Clerk of Councils.

Council Chamber, Hongkong, 19th March, 1864.

Figure 2. Jury Exemption of Chemists and Druggists 1864.

http://dx.doi.org/10.24355/dbbs.084-201801041501

The first Hong Kong Register of Chemists and Druggists under the Pharmacy Ordinance 1908 consisted of thirteen persons including twelve British and one locally qualified chemists and druggists.[20] Mr Cheng Kam Ming was the first locally trained chemist and druggist at the Government Civil Hospital registered under the Pharmacy Ordinance 1908. Of the other twelve chemists and druggists, eight worked for AS Watson, two for Watkins and two for the German Dispensary.

The Pharmacy and Poisons Ordinance 1916 was enacted with an objective to consolidate and amend the law relating to registration of Chemists and Druggists and the sale and use of poisons. A list of scheduled poisons was specified for dispensing and selling by a Registered Person. In Section 19.1, the definition of 'Registered Person' was expanded to include:[21]

> a. If the business of the body corporate, so far as it relates to the keeping, retailing and dispensing of poisons, is under the control and management of a superintendent who is a registered person …
>
> b. If in every premises where such business as aforesaid is carried on, and is not personally conducted by the superintendent, such business is bona fide conducted under the direction of the superintendent by a manager or assistant who is a registered person.

There was a high turnover of apothecaries and dispensers in the Colonial Government during 1913-1915, and training of local chemists and druggists became imminent. Regulation 6 under the Pharmacy and Poisons Ordinance of 1916 laid the ground for a local course of study and examination for applicants for registration as chemists and druggists; it also required keeping of records of dispensing and selling of poisons by Registered Persons.[22] Such regulations provided the framework for comparable governance in modern-day Hong Kong.

The Dangerous Drugs Ordinance 1923 was enacted to regulate the importation, exportation, manufacturing, sales and use of Dangerous Drugs in the Colony of Hong Kong.[23] The first object and reason was described as follows:

> This bill, which is based on the English Dangerous Drugs Act, 1920 and 1923, 10 and 11 Geo. V. c.46, and 13 and 14 Geo V c.5 is intended to carry out the policy of the International Opium Convention, 1912, in so far as that the Convention deals with dangerous drugs.

The law was subsequently updated in 1932. The Pharmacy and Poisons Ordinance 1937[24] repealed the 1916 Ordinance, with new provisions which largely adopted the UK's Pharmacy and Poisons Act 1933. For locally trained chemists and druggists, a syllabus and prescribed training were detailed in the 1937 Ordinance.

The Chemists and Druggists Register 1940, kept under the Pharmacy and Poisons Ordinance, recorded thirty-eight chemists and druggists, of whom seventeen were locally trained, six working for the government, two were pharmaceutical chemists, twenty-two were community chemists with six working at A.S. Watson and others in manufacturing or trading of medicines.[25]

Figure 3. A 1930s poster of Scott's Emulsion of Original Cod Fish Oil.

Western Pharmacy Practice in the Early Years

A handful of community dispensaries started in the 1840s such as Hong Kong Dispensary, Victoria Dispensary, the Medical Hall and a couple of others served the mainly expatriate community and western sailors.

Table 2. List of Hong Kong Chemists and Druggists in 1848 (Source: *Hong Kong Almanack 1848*).

Chemists & Druggists	Location	Manager/Proprietor
Hong Kong Dispensary	Queen's Road	Dr James Hume Young
Victoria Dispensary	Pottinger Street	Messrs Thomas Hunter and George K. Barton
Medical Hall	Queen's Road	Alexander S. Taylor
Messrs Stocker & Co.'s Dispensary	Queen's Road	Charles Stocker
Farriers	Queen's Road East	George Frazar
Messrs Castles & Co.	Stanley Street	Not known

http://dx.doi.org/10.24355/dbbs.084-201801041501

The Birth of Hong Kong Dispensary

Dr Peter Young, who practised at the Canton Dispensary[26] in the late 1830s, moved to Hong Kong and set up a private practice in 1841. He subsequently became a main partner of the Hong Kong Dispensary.[27] James Young, a surgeon and brother of Peter Young, served as the druggist and also manager of the Hong Kong dispensary.[28] The ownership of Hong Kong Dispensary passed on to Dr William Preston and subsequently to Dr Thomas Boswell Watson.[29] In1858, Dr Watson brought his nephew Alexander Skirving Watson into the business, which changed hands a few times until it was owned by John David Humphreys in 1879.[30]

Henry Humphreys, son of John David Humphreys, was born in 1867 in Hong Kong. He was sent to study at St. Helen's College in Southsea, England. Henry Humphreys passed the Major Examination in London and was registered as a Pharmaceutical Chemist in 1889.[31] He returned to Hong Kong the same year and joined his father at A.S. Watson. He subsequently had a diverse business career in brokerage, retail, and property as well as pharmacy.

Humphreys was honoured with the title of Justice of the Peace by the Colonial Government in 1922 in recognition of his contribution to the Sanitary Board.[32] He grew the AS Watson business to a chain pharmacy over a period of 40 years and departed Hong Kong as a multi-millionaire for Vancouver, British Columbia in 1933 and passed away in 1944 at the age of seventy-seven.[33]

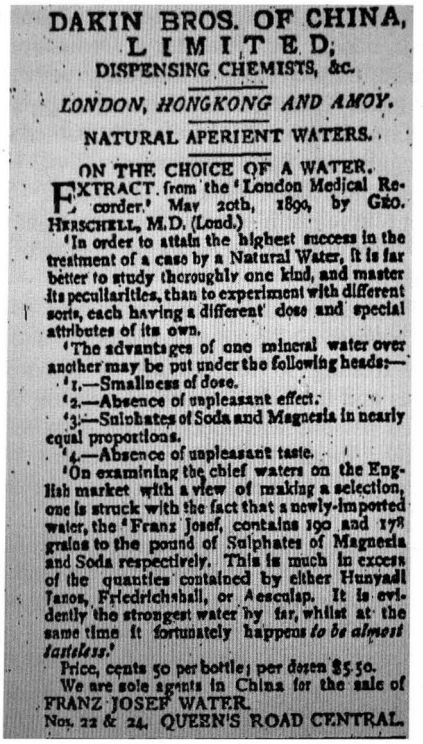
In the first four decades of the twentieth century, A.S. Watson had experienced ups and downs but established itself as a premium western pharmacy chain and had the largest number of chemists & druggists in Hong Kong until the Japanese invasion of China in 1937 which halted its China operations.[34]

Other Apothecaries

Many Macanese followed the British to Hong Kong in the early 1840s when Macau's business with Guangdong was declining while Hong Kong was rapidly replacing it as the re-export centre in Southern China. The Macanese served in the Colonial Government or worked in the private sector and some became entrepreneurs and started their own apothecary business.[35]

Victoria Dispensary was established by Thomas Hunter in Macao, then branched into Hong Kong with its first retail outlet in Pottinger Street in 1846 and later moved to Queen's Road, Central in 1848.[36]

George K. Barton was responsible for the Hong Kong branch of Victoria Dispensary with three Macanese assistants, João Joaquim Rosa Braga, Miguel do Rozario and Jose Leao. Joao Braga became the manager of Victoria Dispensary in 1849 at the age of twenty-one. He was assisted by Alberto Bothelo who learned apothecary skills at the Hong Kong Dispensary before joining the Government Civil Hospital in 1856 as Apothecary.



DAKIN BROS. OF CHINA, LIMITED,
DISPENSING CHEMISTS, &c.

LONDON, HONGKONG AND AMOY.

NATURAL APERIENT WATERS.

ON THE CHOICE OF A WATER.

EXTRACT from the 'London Medical Recorder.' May 20th, 1890, by GEO. HERSCHELL, M.D. (Lond.)

'In order to attain the highest success in the treatment of a case by a Natural Water, it is far better to study thoroughly one kind, and master its peculiarities, than to experiment with different sorts, each having a different dose and special attributes of its own.

'The advantages of one mineral water over another may be put under the following heads:—

'1.—Smallness of dose.

'2.—Absence of unpleasant effect.

'3.—Sulphates of Soda and Magnesia in nearly equal proportions.

'4.—Absence of unpleasant taste.

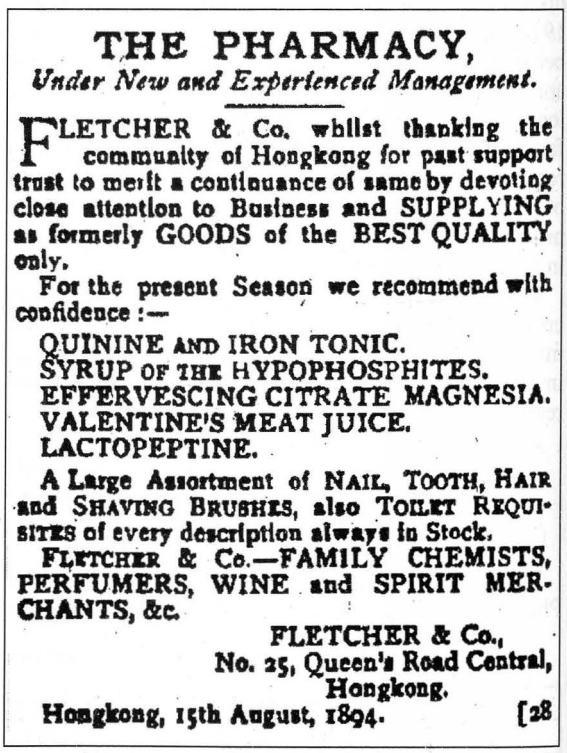
'On examining the chief waters on the English market with a view of making a selection, one is struck with the fact that a newly-imported water, the 'Franz Josef, contains 190 and 178 grains to the pound of Sulphates of Magnesia and Soda respectively. This is much in excess of the quantities contained by either Hunyadi Janos, Friedrichshall, or Aesculap. It is evidently the strongest water by far, whilst at the same time it fortunately happens *to be almost tasteless.*'

Price, cents 50 per bottle; per dozen $5.50.

We are sole agents in China for the sale of FRANZ JOSEF WATER.

Nos. 22 & 24, QUEEN'S ROAD CENTRAL.

Figure 4. Advertisement of Dakin Dispensing Chemists. *Hong Kong Telegraph*, 17 August 1891.



THE PHARMACY,
Under New and Experienced Management.

FLETCHER & Co. whilst thanking the community of Hongkong for past support trust to merit a continuance of same by devoting close attention to Business and SUPPLYING as formerly GOODS of the BEST QUALITY only.

For the present Season we recommend with confidence :—

QUININE AND IRON TONIC.
SYRUP OF THE HYPOPHOSPHITES.
EFFERVESCING CITRATE MAGNESIA.
VALENTINE'S MEAT JUICE.
LACTOPEPTINE.

A Large Assortment of NAIL, TOOTH, HAIR and SHAVING BRUSHES, also TOILET REQUISITES of every description always in Stock.

FLETCHER & Co.—FAMILY CHEMISTS, PERFUMERS, WINE and SPIRIT MERCHANTS, &c.

FLETCHER & Co.,
No. 25, Queen's Road Central,
Hongkong.

Hongkong, 15th August, 1894. [28

Figure 5. Advertisement of Fletcher & Co. in the *Hong Kong Telegrap*h, 15 August, 1894.

http://dx.doi.org/10.24355/dbbs.084-201801041501

Joao Braga's connection with Victoria Dispensary came to an end on 24 August 1857 when he re-opened the Medical Hall Dispensary.[37] Ownership of Medical Hall Dispensary changed hands later to E. Niedhardt, a German national who eventually also changed its name to the German Dispensary.

Many other western pharmacies were opened and then closed throughout the second half of the nineteenth century until the 1920s, with consolidation under a handful of pharmacy groups continuing until the Japanese occupation in 1941.

Government and Western Pharmacy Service

The Government Civil Hospital was opened for service to the expatriate community in 1849 until it was destroyed by typhoon on 22 September 1872. Prior to that, British, European and Indian expatriates would seek clinical and pharmaceutical service from the Victoria Hospital operated by Drs James Satchell and Richard Jones at 1-3 Queen's Road, and several other privately owned dispensaries. Visiting sailors would attend the privately operated Hong Kong Seamen Hospital, and poor labourers would seek treatment at the Hospital of the Medical Missionary operated by Dr Benjamin Hobson.

Alberto A Bothelo became the first colonial government apothecary in 1856.[38] He acquired his knowledge and skills initially at the Hong Kong Dispensary and later as Apothecary at Victoria Dispensary. In the Annual Report of the Colonial Surgeon 1878, compiled by Dr B.C. Ayres, Bothelo's much valued work was summarised as follows:

> This year we lost the services of an old and valued servant of the Government – Mr. A.A. Botelho, Apothecary to the Government Civil Hospital, who retired, owing to ill health, after twenty three years' service. It has been impossible to procure an equally trustworthy and efficient officer in the Colony to take his place at the same pay.[39]

The Colonial Government appointed Hugh McCallum, a native of Banffshire who passed the Major Examination as a Pharmaceutical Chemist in Edinburgh, to become the first Apothecary and Analyst in Hong Kong in November 1879. His work in the analysis of water, milk, opium, poisoning and other substances was so impressive that he was promoted to a newly created position of Sanitary Inspector on 10th April 1883.[40]

William Edward Crow succeeded Hugh McCallum as the Apothecary and Analyst in 1883. He showed interest in the use of Chinese herbal medicine and worked closely with Charles Ford, Director of the Botanical Gardens, and Sir Kai Ho, MB, CM, the first Chinese physician graduated at the University of Aberdeen in 1879. They co-authored a paper 'Notes on Chinese Materia Medica'.[41] Edward Crow was suspended from work for unknown reasons, as documented in the Annual Report of the Medical Department 1898.[42]

Frank Browne was qualified as a pharmaceutical chemist in 1888 and joined the Colonial government in Hong Kong in August that year as Assistant Apothecary. He succeeded William Crow as Apothecary and Analyst in 1898.[43] Frank Browne became the full time Government Analyst in 1909 and he ran the Government Laboratory as an independent department for chemical and poison analysis and was known as the 'Founder of Government Laboratory' in the local community.

Arthur Cawte Franklin joined the Colonial Government as Assistant Apothecary on 12 August 1902 and became Apothecary and Assistant Analyst reporting to Frank Browne, the Government Analyst, in 1909. He retired on 31 August 1913.

During the First World War 1914-1918, there was a succession of four apothecaries; namely Harry Alan Taylor, Alfred Norman, Douglas Pullen, and Robert Ashby who was assigned by the military authorities for a year and then recalled in 1919. In 1939, the Pharmacy Branch of the Medical Department had a team of 27 pharmaceutical professionals; a Chief Pharmacist, two full-time and one temporary pharmacists and charge dispensers taking responsibility for hospitals and dispensary service across the Colony.[44] They were assisted by staff dispensers and probationer dispensers who were students working towards their local Chemist and Druggist Qualifying Examinations.

Ralph Edgar Cable was the second longest serving in the position of Apothecary from 1919 to 1940 after A. Botelho. Ralph Cable was instrumental in the development of the local Chemist and Druggist course in conjunction with the University of Hong Kong and was awarded the Imperial Service Medal by the King on 9 February 1940.[45] Cable was succeeded by Lewis John Morley in July 1941 but his service was cut short by the Japanese occupation in December 1941.[46]

1940 was a year of challenges for the Colonial Government Pharmacy Department, having to cope with the needs of 1.8 million population including 24,000 British and foreign residents.[47]

Table 3. Hong Kong Government Apothecaries and Analysts, 1854-1941

Period	Apothecary (Double-up as Government Analyst Until 1908)
1954-1878	Alberto A. Botelho
1879-1882	Hugh McCallum, PhC
1883-1898	William Edward Crow, PhC
1899-1908	Frank Browne, FIC, FCS, PhC, JP
1909-1912	Arthur Cawte Franklin, FIC, PhC
1913	Gerald Lenton, Harry Alan Taylor, PhC
1914-1918	Norman Douglas Pullen, PhC
1918-19	Robert Ashby, Ralph Edgar Cable, FCS
1919-1939	Ralph Edgar Cable, FCS
1939-1941	Lewis John Morley, C&D

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Conclusion

In the first one hundred years of British colonial rule in Hong Kong, western pharmacy evolved from a handful of lay apothecaries serving a couple of hundred British and European expatriates in the 1840s into thirty-eight qualified chemists and druggists serving the pharmaceutical needs of 20,000 expatriates and a sizeable proportion of the 1.8 million Chinese community in 1940.

The early years of western pharmacy in Colonial Hong Kong went through a process and followed a path aptly described by Stuart Anderson with regard to the Straits Settlements:

> The person responsible for medicines initially was usually a ship's surgeon. This generally transferred to military surgeons on land, and the role was soon delegated to subordinates, often apothecaries or apothecary's assistants. As the apothecaries took on increasingly medical roles, responsibility for medicines passed first to chemists and druggists and later to pharmacists.[48]

In the nineteenth century, the Colonial Hong Kong government in its administration of the Colony's healthcare system, as well as other facets, followed the laissez-faire policy of Great Britain closely until health disasters forced changes to be made towards the end of the century.

Mark Harrison noted that:

> The prevailing ideology was also far from interventionist, being a mixture of liberal political economy and Malthusianism. Each individual was expected to take care of his or her own health, and high mortality was tolerated as part of the natural order. [49]

The 1894 bubonic plague exposed the weakness of the laissez-faire policy that social medicine and pharmacy service, western or traditional, was totally inadequate for the vastly poor migrants from Guangdong who lived in over-crowded shanty towns without sewage systems and amongst swarms of mosquitoes and rats which helped spread the plague. The pandemic resulted in over 2,500 deaths within a period of six months in 1894. Mortality of Chinese and Europeans were 93.4% and 18.2% respectively.

After a century of introduction and advancement of pharmaceutical science, and continued characterisation by the Colonial Government of TCM as a local custom and its consequent regulatory neglect, more than two-thirds of local in-patients opted for western medicine at the Chinese hospitals in 1938. Equally notable however is the fact that in 1938, out-patients for TCM were 1.8 times of those seeking western medical treatment.

A reasonable interpretation of the anomaly of this situation is perhaps a combination of different forces: the relative effectiveness of western medicine in acute illnesses; entrenched belief by the local population in the more natural therapeutic approach of TCM which had the backing of a long history; and the Colonial Government's tolerance of a peaceful co-existence of traditional medical practices and the western system which approach in itself was reflective of the laissez-faire policy of the Colonial Government at the time.

On the regulatory side, key pharmacy laws relating to the sales of dangerous drugs and poisons, and training and registration of local pharmacists which had been passed from the early twentieth century have had a lasting influence on modern day governance of pharmacy practices in Hong Kong. The many challenges posed by demographics, government policies, local medical customs, diseases, epidemics, and tropical weather against the backdrop of a turbulent era of transition from the late Qing Imperial Dynasty to the young Republican Government in the Mainland, had cumulatively made a forceful impact on the beginnings of western pharmacy in Hong Kong.

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Two 17th century skin balms for warts and pimples?

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Skin balms (sometimes: ointments, plasters, salves, unguents)[1] of the past were used for a variety of skin ailments, such as general skin emollient/anti-inflammatory agent, burns, stings, sores, ulcers, bruises, lesions, to aid wound healing and for a whole range of skin eruptions.[2,3,4] By the 17th century skin balms usually consisted of beeswax and/or fat as basis, with a vegetable oil often added to give a pliable semi-solid at room temperature, which could be readily applied to the skin. Also, a colorant of pleasant aroma was often added (e.g. a small amount of rose oil, or the basis was left to macerate in rose petals). Such a mixture could constitute a general skin emollient. Additional 'active ingredients' were added to give a recipe for a particular skin ailment. These active ingredients could be inorganic compounds (such as lead and mercury compounds), other organic materials (such as honey, resins and whey) and a huge array of herbal materials.[5,6,7,8,9]

There are few examples of such balms that have not only survived the vicissitudes of time, but have also been chemically analysed and the results published. Brief summaries of three examples are given below.

1. Residues from seven Roman glass unguentaria were analysed using various combinations of gas chromatographic and mass spectrometric techniques. The unguentaria were found during an excavation of a Roman villa in the ancient town of Oplontis (now: Torre Annunziata, about 20 km SE of Naples, Italy), and were dated to between the 1st century BC and the 1st century AD. Beeswax, pine resin and another waxy-lipid material of plant origin were identified in all of the residues. It was suggested that these contents indicated that they were originally made as cosmetics (e.g. moisturising face creams) *or* as (emollient) skin balms.[10]

2. A greasy residue was excavated, in its original ceramic container, from the bottom layer of the moat of a Belgian castle (Middelburg). It was dated to between the second half of the 16th century and the early 17th century. Several analytical methods were used to identify its various components. Interpretation of all the analytical data indicated that the original material was an ointment and had consisted of a lead plaster, beeswax and a small amount of gypsum ($CaSO_4.2H_2O$). A lead plaster is an impure lead soap made by heating a lead compound with a vegetable oil or animal fat. Such an ointment was used in Europe of this time period as an external dressing for bruises, sores, ulcers and burns.[11]

3. Four old ointment residues, obtained from labeled containers in the Aboca Museum (Sansepolcro, Arezzo, Italy), were recently studied by Pyrolysis-GC/MS. They had been dated to be from the 16th and 17th centuries. The analytical results indicated, variously, the presence of: beeswax (in one sample and in another possibly), resin (in two samples), animal fat (in three samples) and vegetable oils (in two samples possibly). The uncertainty in some of the above results was caused in part by a degree of degradation in all the samples; usually either by air (oxidation) and/or moisture (hydrolysis). The four ointments, *Unguentum Althea, Colophonie, pro Igne,* and *Rosatum*, were variously used as topical skin ointments (i.e. emollient, wound cleaning, burns and astringent).[12]

Samples and Provenance

In May of 1654 Ferdinando II de' Medici (Figure 1), Grand Duke of Tuscany (1610-1670, ruled 1621-1670) instructed his English agent to acquire a portrait of Oliver Cromwell (1599-1658; Figure 2), Lord Protector of England (1653-1658). By the end of the year a portrait had been delivered to him. Exactly which portrait he acquired is unclear; it could have been the famous one ('warts and all'; see Figure 2) by Sir Peter Lely (1617-1680) or possibly the one reputedly done by Robert Walker (1599-1658).[13] However, this latter picture is sometimes attributed to Lely and such a picture is now in the Uffizi Gallery of Florence. The more famous Lely picture is now to be seen in the Pitti Gallery of Florence.

Figure 1. Ferdinando II de' Medici, Grand Duke of Tuscany. Wikimedia Commons

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Figure 2. Oliver Cromwell, Lord Protector of England. © Cromwell Museum, Huntingdon, UK

Figure 3. The Florentine cabinet and its samples' containers. © Cromwell Museum, Huntingdon, UK

There is evidence that in 1657 the Grand Duke sent various gifts to Oliver Cromwell, one of which is reputed to be the stone inlaid Florentine cabinet and its contents (Figure 3) currently on display in the Oliver Cromwell museum in Huntingdon (Cambridgeshire, UK). The cabinet's dimensions are: 41cm wide by 36cm deep and 29.5 cm high. The cabinet has been independently inspected by furniture historians and assessed to be a Florentine 'pietra dura' (literally: hard stone) cabinet made in the period 1653-1658.[14] The contents of the cabinet's small tubs/pots (seen in the foreground of Figure 3) are believed to have been made up by 'L'officina Farmaceutica di Santa Maria Novella' in Florence prior to the cabinet being sent to England.[15]

The contents of the cabinet's tubs/dishes were all removed and placed in modern air-tight containers about thirty-five years ago. Samples from the *top* drawer of the cabinet were found to be soft soaps, as reported by us in a previous article.[16] Small amounts were also removed from two containers whose contents had originally come from the cabinet's *middle* drawer (and which had been provisionally thought to be skin balms). We present here the results of our chemical studies on these two 17th century samples; which were yellow sticky semi-solids with a mildly pleasant aroma.

Analytical Methods and Results

The two samples (labeled MD 16 or 55 by us) were chemically characterised using three analytical techniques. Quantitative elemental composition (down to and including the atomic number of 6, i.e. carbon) was given by the technique of Low Vacuum Scanning Electron Microscopy (LVSEM), and identification of the crystalline compounds present by the X-Ray Powder Diffraction (XRPD) technique. Also, some initial exploratory work was done on both samples using a third technique, GC-MS (Gas Chromatography-Mass Spectrometry), in order to obtain information on the identities of the organic compounds present.[17,18]

The LVSEM results were (in decreasing order of elemental weight percent, with the elements in round brackets having values of 1% or less each and those in square brackets being those elements only occasionally found and always in very small amounts):

MD 16: C, O (Na, Ca) [P, Fe, K, Si].

MD 55: C, O (Na, Ca) [Si, P, S, K].

The XRPD results showed a general pattern of low angle (i.e. between 2 and 12 degrees) two-theta peaks for both samples, which were interpreted as showing the presence of a crystalline lamellar-lattice compound. From the peak positions and pattern of their relative intensities this compound was identified as the soap salt sodium palmitate ($Na^+ C_{15}H_{31}COO^-$). The amount in sample MD16 was found to be appreciably larger than in sample MD55. This sodium salt is found in (hard) soaps formed from caustic soda (NaOH) and an oil or fat where the glycerol ester of palmitic acid is a major component (such as palm oil). There was no evidence found for the presence, in either sample, of palmitic acid or of an acid:salt

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complex.[19,20] Similarly, diagnostic diffraction peaks for beeswax were found in the data from both samples, where the amount in MD55 was appreciably larger than in MD16.[21]

However, interpreting the remaining diffraction peaks in both samples proved more difficult. Unfortunately the remaining unassigned diffraction peaks are almost entirely weak peaks and/or near-overlapping peaks with peaks previously assigned. The one exception is a strong broad peak centred at about 4.1 Å (with a peak width of 4.9 to 3.4 Å). This broad peak, along with the weak/near-overlapping peaks, are variously indicative of the presence of one (or possibly more) fat or oil. The ones considered most likely are palm oil, an animal butter/dairy fat or cocoa butter (a vegetable fat).[22,23,24]

GC-MS: A total of four analyses were done (i.e. two per sample). Total Ion Chromatogram (TIC) GC-MS (that is, no derivatives formed prior to injection into the apparatus) using the solvent dichloromethane (DCM) and later Fatty Acid Methyl Ester derivatisation on methanol-extracted material (FAME GC-MS). The results are summarised below, with additional data on the various abbreviations used given in an Endnote.[25]

TIC GC-MS: Unfortunately this data gave limited useful information. Both of our samples, when dissolved in DCM, gave data which had weak or very weak peaks corresponding to odd-numbered alkanes (molecules of general formula C_nH_{2n+2}) in the range C23 to C29; and one sample (MD55) had a strong peak for the W40 wax ester whilst the other sample had only a weak peak for its presence. This pattern of peaks for odd-numbered (C21 to C31) alkanes (often depleted in old samples from environmental effects) and even-numbered (W38 to W52) wax esters is indicative of beeswax.[26] Whilst our data are limited we feel that they indicate the presence of beeswax in both samples, with appreciably more in sample MD55 than in sample MD16 - as also found from the XRPD data.

FAME GC-MS: *MD16* sample. Nine of the eighteen compounds identified were saturated straight-chain carboxylic acids (C8/9/10/16/18/20/21/22/24, to a total presence of almost 79%). The five acids having the highest percentages were: C16:0 (24.3%), C22:0 (18.6%), C18:0 (16.5%), C20:0 (12.0%) and C24:0 (3.3%). Additionally there were: four dicarboxylic acids (C7:0 to C10:0, to a total of 10.4% and where C9:0 (Azelaic acid) had the largest amount present at 4.7%); two C18:2 isomers (to a total of 3.7%); one oxo- and one dihydroxy- derivative of C18:0 (at 0.5% and 3.8% respectively); a small amount of C18:1 (Oleic acid, at 3.4%) and a just detectable small amount of C17:0 (estimated to be about 0.2%).

MD55 sample. Twelve of the twenty-five compounds identified were saturated straight-chain carboxylic acids (C7/8/9/10/16/17/18/20/21/22/23/24, to a total of almost 74%). The four acids with greater than 10% values were: C16:0 (20.3%), C18:0 (18.7%), C22:0 (16.3%) and C20:0 (12.0%). There were also present: six dicarboxylic acids (C6:0 to C11:0, to a total of 13.8% and where C9:0 had the largest amount present at 5.8%); two C18:2 isomers (to a total of 6.3%); one oxo- and one dihydroxy- derivative of C18:0 (at 0.7% and 1.8% resp.); one oxo- derivative of C9:0 (at 0.3%); some C18:1 (at 3.0%); and a very small amount of phthalic acid (at 0.2% – where this last compound is the acid derivative of the plasticiser diethyl phthalate assumed to be from its most recent container). The amounts of C17:0 and C24:0 found were 0.4% and 2.0% respectively.

Interpretation of the FAME GC-MS data will be done in the next section.

Discussion

The FAME GC-MS data for our two samples shows the presence of significant and approximately equal amounts (i.e. a few tens of percent each) of Palmitic (C16:0) and Stearic (C18:0) acids. This indicates the presence of ruminant or non-ruminant fat rather than an (animal) dairy/butter fat or a vegetable oil, as the last two materials have significantly more C16:0 present than C18:0. Also, both our samples contain, to about the same degree, oxidation degradation products of unsaturated fatty acids (i.e. di-carboxylic acids and oxo-/di-hydroxy FA derivatives). This is consistent with our samples containing partially degraded fat, where this (degraded) material has been formed over about 350 years, with the pots being in a warm (estimated to be between 10 C and 25 C) and dry environment; the original pots were covered by semi-porous vegetable parchment paper and this usually with filigree fabric. The relatively large amounts of the FAs C20:0/C22:0/C24:0, in both samples, *could* indicate the additional presence of a plant wax, but this will have to await the results of more detailed GC-MS work in a later publication.[27,28]

Our FAME GC-MS analyses involved hydrolysis of *all* esters (beeswax)/acylglycerols (fats)/soap molecules present into their component fatty acids, which were then methylated. Also, any free acids present, formed by any partial (degradation) hydrolysis of some of the molecules originally present or by being present initially, were also methylated. All these methylated esters were then identified and their associated FAs listed with their relative (%) amounts (see previous Results section). All the stearic acid found must come from our third ingredient (none being present in either beeswax or our soap) and our palmitic acid percentages are each made up of *three* components – from the soap (sodium palmitate), the wax esters in beeswax[25] and some from our third ingredient.

The P/S (Palmitic to Stearic acid ratio) is 1.5 for sample MD16 and 1.1 for sample MD55. By utilising *all* our analytical data we can say that the P/S value for our third ingredient *alone* is <1 and possibly <0.5. This indicates that our third ingredient is ruminant adipose fat (cattle or sheep usually, but possibly a

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'game' animal, such as deer).[27] However, of the three possibilities for this third ingredient suggested by the XRPD data (palm oil, animal dairy/butter fat and cocoa butter) only cocoa butter has a P/S value of less than one (a typical value being 0.75). Therefore cocoa butter is also a possibility for our third ingredient; or perhaps as part of a mixture of it and ruminant adipose fat.

To resolve the uncertainty concerning the identity of our third ingredient further analytical work is needed, in particular using the Gas Chromatography–Combustion–Isotope Ratio Mass Spectrometry technique (GC-C-IRMS). Given below is some relevant historical information on cocoa butter, followed by past medicinal uses of all our ingredients.

Cocoa butter (theobroma oil) is a yellowish solid at (European) room temperatures. It is obtained by pressing of the fermented, cleaned, dried, roasted and decorticated cocoa beans. The evergreen, tropical tree (*Theobroma cacao*) originated in Central and South America and the beans were transported to Spain by Hernan Cortes in 1528. Chocolate, and the associated cacao (roasted beans), was known and used as a medicine in Europe of the late 16th and early 17th century. In Florence, at the end of the reign of Ferdinando I (Grand Duke of Tuscany, d. 1609), chocolate was being sold by an apothecary as a heart medicament. It was also gradually being used as a main ingredient in drinking chocolate. The situation with respect to cocoa butter is less certain. The oily/unctuous/oleaginous component of cacao (i.e. impure cocoa butter) was known in Europe from the late 16th/early 17th century onwards. What is uncertain is if it was being used as an ingredient in ointments/balms/unguents of the early 1650s.[29]

Medicinal uses of soaps have varied over time; some examples are: Galen (c. 130-200 AD) advocated the use of soap as both a medicament and preventive for treating/covering various skin problems;[30] present in several recipes for burns of the early 17th century;[3] a medicated soap made from turpentine oil and vegetable (ash) alkali was a popular remedy taken internally for relief from 'gravel' (urinary stones) in London of the late 17th century;[30] and Castile soap (from plant ash alkali and usually olive oil) was used, in the form of pills, for dysentery in the (mid-) Victorian period.[31] Also, there were the previously mentioned (see Introduction) lead plasters – lead soaps made by heating a lead compound with a vegetable oil or animal fat – which were perceived to be the active ingredient in the treatment of ulcers, sores, bruises and burns (and which were possibly first invented in the time of the Roman emperor Tiberius, who reigned 14 to 37 AD, and used until the late Victorian period).[11]

Beeswax has been variously used for millennia. Uses such as: adhesive, water-proofing, a writing ground and as an embalming material can all be traced back to ancient Egypt.[26] Its *medical* uses can be traced back to the Roman period; from when it was used both as an individual topical remedy (for haemorrhoids, burns and wounds[32]), as a hydrophobic covering for broken skin and as a container/carrier for one or more 'active ingredients' for a particular skin ailment (e.g. lead plasters for leg sores or ulcers[11]).

Both ruminant animal fats and cocoa butter were used as emollients for skin ailments in the past; and cocoa butter's medical applications also included: for burns, eruptions, chapped hands/lips/face; as a suppository and as an ointment basis; and it was specifically recorded as a skin cleanser in Spain of the 17th century.[12,29,33,34]

Oliver Cromwell famously suffered from warts and pimples (see Figure 2), though it is now considered unlikely that he made the 'warts and all' comment to the painter Sir Peter Lely (1617-1680). Details of any medication he used for them is largely unknown. However, it is known that he once ingested a large amount of the well known panacea Mithridatium[35] as a plague preventive (date unknown). He did not catch the plague, and did find that it cured his pimples.[36]

Warts are of viral origin and up to two-thirds of them will, without treatment, resolve spontaneously within 3 to 24 months of their first appearance. Remedies for them in 17th century England included 'transference' (i.e. the passing of the wart to another person, plant or inanimate object), prayers and incantations (sometimes involving a wart-charming stone), washing the hands in moonbeams in an otherwise empty and well polished silver basin, and a whole variety of malodorous/disgusting 'cures' either ingested or topically applied. Various herbal remedies were also used: greater celandine (*Chelidonium majus*) was a popular remedy, as was sun spurge (*Euphorbia helioscopia*).[37] Present day initial treatment would be with a salicylic acid gel/cream, followed by cryotherapy (using liquid nitrogen) if required.[38]

Conclusions

The combined results of several analytical techniques have shown that our two samples each originally contained, in varying amounts, a soap salt (sodium palmitate), beeswax and either a ruminant adipose fat or cocoa butter (a vegetable fat), or possibly a mixture of both. However, whilst chocolate was known in Florence of the mid-17th century, where it was beginning to be used both as a medicine and as a beverage, it is uncertain if cocoa butter was being separately used medicinally (in ointments) at this time and place. Thus there is a degree of uncertainty about the identity of this third ingredient (and there is also the possibility of other so far unidentified ingredients), and we hope to publish a later paper after more detailed GC-MS work has been done.

Such samples as ours could have been intended as general skin emollients, or for a specific skin ailment, where one (or more) of the ingredients was regarded as the 'active ingredient(s)'. Both beeswax and cocoa

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butter/ruminant fat were used as emollients and so in our samples the 'active ingredient' could perhaps be the sodium soap salt. As to how efficacious our samples would have been when applied to the skin is unclear, but they would at least have covered/protected and soothed a skin ailment.

Historians have an obligation 'to explain', rather than just record, the past. The 'puzzle of the past' here is determining the composition and possible uses of our two samples/balms. We feel we have largely determined the first, but can only make suggestions for the second. This shows how any explanation must in reality be limited; here, by degradation effects over centuries, the complexities of interpreting the associated analytical data, and by the lack of any direct documentary evidence of the recipes used to make our original samples.

Also, whilst there is some evidence that these samples were given to Oliver Cromwell and that they were intended to be used as skin balms, there is no actual evidence that he *used* them on his warts and pimples.

Acknowledgements

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Endnotes and References

1. The word balm is an older term for ointment, as are the words plaster, salve and unguent. Only a little, or no, water is present when made, in comparison to creams where a higher amount of water is initially present. A balm is more viscous than a cream, is topically applied to a small region of the skin and as it is insoluble in water will not readily wash off. A plaster is often a more solid material than a balm, which usually has to be gently heated before it can be easily applied to the skin.

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be read words, mostly in old Italian) and this with filigree fabric.

15. Unfortunately, though the Pharmacy agrees that it did make gifts for this Grand Duke, they have been unable to find evidence that they made *these* samples. The website address for this famous pharmacy in Florence is: www.italian.it/santamarianovella/smnuk.htm

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'Golden Liberty': A Remarkable Time for the Apothecaries of Krakow in the Early Modern Era (16th to 18th centuries)

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Why Golden Liberty? Polish society in the Early Modern Era

One of the most interesting issues in the history of Poland during the Early Modern Era is undoubtedly the social structure that was unmatched anywhere else in Europe. By comparison with other European states, as N. Davies mentions, 'where the nobility formed only 1 or 2 per cent of society, the Polish *szlachta*, at 8-12 per cent, was extremely numerous, and formed by far the largest franchised class in Europe.'[1]

The *szlachta* was diverse. It ranged from rich powerful landowners and noble magnates to so-called 'noble rabble,' sometimes poorer than simple peasants.[2] However the legal status of every nobleman in the Commonwealth (i.e., the Kingdom of Poland and the Grand Duchy of Lithuania[3]) remained equal, supported by such values as exclusivity, equality, unanimity, resistance, and individualism. However, the *szlachta* were uncharitable toward other social groups such as merchants, tradesmen and craftsmen who were viewed with undisguised contempt.[4] Dabbling with bourgeois occupations was considered inherently dishonest and dishonourable. The 16thcentury Polish writer, S. Orzechowski, wrote that the nature of those crafts is that, they are 'dirty and stinking.'[5]

Similar views were represented by other Polish artists and writers of that time. For example, M. Rej was of the opinion that improving trading skills was actually equivalent to learning how one could best cheat clients.[6] It is not surprising, then, that in 1633, the parliament of the Commonwealth passed a law concerning noblemen and trade. Accordingly 'every nobleman loses his title if, being settled in a city, he deals with trade and sale of spirits or holds an office in Municipal Council.' Moreover, 'he as well as his descendants born at that time [were] not allowed to buy land.'[7] While the Noble class, proud and haughty, took great efforts to maintain purity of 'blue blood' and defend its honour, over time every virtue proclaimed by the *szlachta* was turned into a vice and the so-called *Golden Liberty* professed by noble class led to the common anarchy in the Kingdom.[8] Daniel Defoe described Polish noblemen, saying:

> In the first place, they are the most haughty, imperious, insulting people in the world. A very valuable historian of our times sayes they are proud, insolent, *obstinate, passionate, furious*. These are indeed the born gentlemen [...] Yet if you should ask a *Polander* what he is, he would tell you, he is a *gentleman of Poland*; and so much so they value themselves upon the name, that they think they are above being tyed to the rules of honour, which are the onely constituting laws of gentlemen. Nay they support themselves upon their being gentlemen even in doing the foulest and blackest things and which we say are below a gentleman and expect the allowance in those things, even from Heaven itself, on account of their birth and quallity.[9]

Although Defoe's opinion cannot be entirely reliable and objective, it shares the view of many Polish historians, intellectuals and even some nobles who blamed their own class for the collapse of the country. The nobility considered themselves as standing above the rest of society, applauded the anarchistic ideology of unrestrained personal freedom, xenophobia and national megalomania, manifested by negating any reforms reducing their golden freedom. That was already remarked in the 16th century by some of their representatives. For example, a nobleman and famous historian and collector of that time, *Stanisław Górski*, was writing: 'The wise senators passed away and the lead was taken by fools and those, who only run after own good and agree in everything with the king without thinking of the future of the Commonwealth.'[10] Also a Polish-Lithuanian nobleman Adam Naruszewicz in his poetic satire 'Nobleness' (*Szlachetność*) written in 1771 notices that 'in Poland the golden liberty upholds only those rules: to impale the peasant, to leave nothing to the middle class, and to exalt the nobility.'[11]

The place of apothecaries in Polish Society of the Early Modern Era

Ever since the Middle Ages, European apothecaries as merchants and craftsmen belonged to the bourgeoisie and were organised into guilds. In Italy, for example, guilds possessed significant political strength in cities (e.g. Venice, Florence) and played important roles in the social life. Guilds existed also in England, France and Germany, although they were mostly professional or commercial organisations. In the Commonwealth the situation of apothecaries remained for a long time unregulated. During the 16th to 18th centuries apothecaries' guilds were present in only a few Polish cities like Lvov (*Congregatio apothecariorum* since 1609) or Poznan (*Collegio pharmacopolarum* since 1718).[12] In others, for example in Warsaw, with the privileges of kings Sigismund I of 1516, Sigismund II of 1554 and Sigismund III of 1589, apothecaries were incorporated into goldsmiths' guilds. In Kalisz and Gniezno apothecaries were members of the brewers' guild, whereas in Bydgoszcz, Chrzanow, Wągrowiec, Nowy Sacz and Rzeszow they were associated in so called *fraternities* of craftsmen.[13]

Absence of an apothecaries' guild in Krakow

In contrast, apothecaries' guilds were never created in Krakow. In the 1653 census of Krakow's craftsmen, apothecaries were described as *extra contubernium*, not belonging to any guild,[14] Why this happened is unclear, but Lvov apothecaries emphasised that their art had nothing in common with the crafts, and that

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the rights of apothecaries are inviolable like those of the 'famous apothecaries of Krakow, established in old privileges.'[15] The absence of a guild is perhaps surprising given that one would have favoured the Polish Noble class in defending its interests.[16]

Faced with limited *legislative controls* in cities, the situation of many professions was difficult as suggested by two high Austrian officials, Haugwitz and Procop, who, in the middle of the 18th century, were exploring the possibility of trade cooperation between Poland and the countries of the Habsburg Monarchy:[17]

> The nobility possesses the greatest liberties. Very often a *Schlachtiz* or Polish nobleman enters the shop and selects wares, asking for a desired piece of material to be cut. When he obtains it he sets the date of payment according to his own preferences. If a merchant doesn't agree with that, he is lucky if he can retain the cut material. Most often the nobleman keeps it while offending the poor merchant with a thousand insults ... even threatening with a sabre, so that a frightened merchant is glad if he can appease the angry customer with his docility.

Figure 1. Jerzy Pipan's epitaph on the facade of the Church of Saint Barbara. Krakow, Poland.

Even in the face of oppression and injustice from the noble class, the apothecaries of Krakow preferred to act on their own. First of all, they believed they had a status higher than craftsmen. Apothecary, Jan Andrzej Szaster, asked about membership of any organisation, commented in 1778, that: 'because pharmacy is *ars liberalis*, we do not have any congregations or meetings.' This trend was, however, evident not only in Poland but in the whole of Europe, in the time when apothecaries strived to create academic courses of pharmacy.

It is not without significance that apothecaries of Krakow attained high positions in the city council. They were aldermen, councillors, and city mayors. Some held different offices several times, for example Jerzy Pipan III was not only alderman (1639) and councillor (c. 1646), but also city mayor (1647, 1648, 1651, 1659) and royal secretary. The strong social position of Krakow apothecaries may explain the lack of interest in creating professional organizations.[18]

A further important factor that contributed to the lack of professional organisation among apothecaries was royal privileges. Those apothecaries, who had been awarded the title of Royal Servant (Servitor Regis) by the ruler, enjoyed exclusive privilege to supply exotic, expensive and luxurious wares for the royal court. They had not only a steady market for their goods, but also exemption from the payment of customs duties on imported wares. Subjugation to professional organisations could only restrict the freedoms and benefits of privileged apothecaries.

The multi-ethnic, multi-religious city and apothecaries

'Golden Liberty,' in conveying disproportionate rights and privileges to the *szlachta,* retarded the development of cities and the countryside. Until political structures declined by failing to adjust to changing situations, the Polish-Lithuanian Commonwealth had its Golden Age with a political system unique in Europe. While most European countries tended towards centralisation, it experimented with federalism, democracy, separation of religion from the state, and religious tolerance.[19] The 1573 Confederation of Warsaw made freedom of conscience a constitutional right at a time when the rest of Europe was largely persecuting religious minorities.[20] Freedom of religion and of trade drew many foreign apothecaries to settle in Krakow where they could easily open a new shop in the absence of regulations limiting their number. In the multicultural Commonwealth, Poles constituted only 40% of the whole population.

The Commonwealth attracted dissenters like Lutherans, Calvinists and Arians during the European Reformation with settlers from many countries. Linked to cultural, political and economic development in the 16th century many Italian merchants, artists, architects and builders, doctors and apothecaries settled in the royal city.[21] The study of D. Quirini-Popławska mentions nearly two hundred Italian courtiers who

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came to Krakow in the first half of the 16th century and held prominent positions at the royal court. She emphasises however, that the actual number of Italians working for the Polish court could be much higher.[22] Among them were also apothecaries, for example Marco Revexla of Novara, Giovanni Alantse from Venice, Francesco de Radicibus of Novara and Floriano Caborti of Otranto.

Figure 2. Angelo Caborti's coat of arms made in plaster by Władysław Stanilewicz on the basis of the 16th-century drawing. Museum of the History of Pharmacy, Krakow, Poland.

The most prominent family of Krakow apothecaries, the Pipans, also started as immigrants. George Pipan the Elder, who ran the pharmacy of *The Golden Head* in the Main Square, came to Krakow in 1527 from Ljubljana (Slovenia). An interesting example of a family of apothecaries and physicians are the Kalahoras, Sephardic Jews from Spain (the family name was based on the name of the Spanish town of Calahorra), who settled in Kazimierz in 1565.[23] Dr Solomon Kalahora, who studied under the famous botanist Antonio Musa Brassavola, was nominated court physician of king Sigismund Augustus after the resignation of another Jewish physician, Solomon Ashkenazi.[24] Kalahora was not only an excellent physician, but a Talmud scholar and a talented merchant. He treated the king and his immediate circle, as well as representatives of the nobility and the wealthy bourgeoisie. In Kazimierz he ran an apothecary shop. Kalahora's pharmacy supplied a Jewish hospital and expedited free medicines to the poor Jews.[25]

Szymon Ronenberg (or Ronnenberg, d. before 1604) was a royal physician and pharmacist (*medicus farmacopoeus*) as well as a husband of

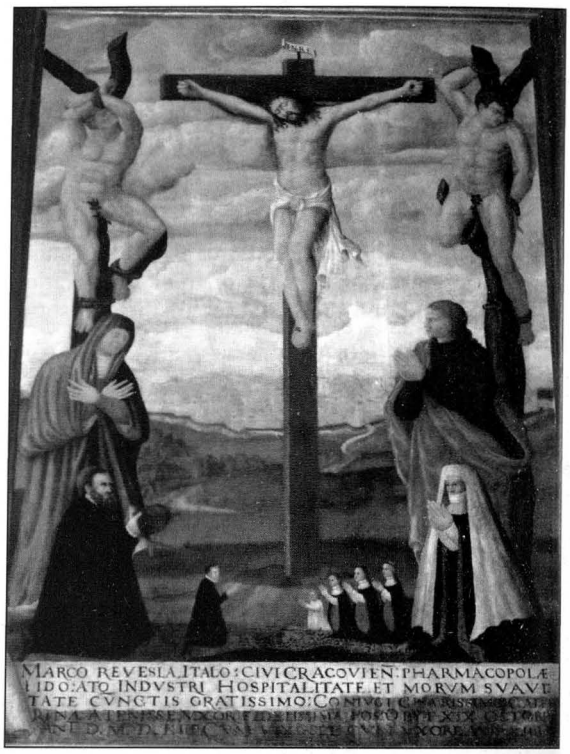

Figure 3. Epitaph painting of the Crucifixion and the kneeling figures of an apothecary, Marco Revesla (Revexla), his wife and children. Signature: *Marco Revesla, Italo, Civi Cracoviensia Pharmacopolae, fido atque industri, Hospitalitate et morum svavitate cunctis gratissimo: coniugi charissimo Cataharina Alentse, Uxor fidelissima posuit. Obit 19 Octobris, 1553. cum Vixisset Uxor XIIII annis*. Sacristy of the church of the Franciscan Fathers in Krakow, Poland.

Agnieszka Revexla, daughter of Marco. Along with his brother Ernest, he gained the recognition of his royal title from king Sigismund Augustus in 1572. Ronenberg came from Germany and was a leading activist of Arianism.[26] In fact German names were among the most conspicuous foreign group among the apothecaries of Krakow during the 14th to 16th centuries, where they practically supplanted the native elite. They also received privileges from the prince and were granted a settlement charter in 1257, contributing significantly to the city's growth.[27] Names included, for example, Paweł Tanneman, Piotr Guldenstern and Franciszek Scheinborn, owner of the *The Lizard* pharmacy.

Another prominent family, the Szasters, was of French protestant origin. The progenitor of the Polish line of Szasters, Michał Szaster (*de Chastres*), received civic rights in 1720, moving from Levoča (Slovakia) to Krakow. He was raised in Slovakia by a Calvinist, Daniel Henry von Franksztein.[28]

In 1714 Szaster was practising in a pharmacy, *The Golden Head*, owned at that time by Mikołaj Chudziński. After finishing his apprenticeship he married Chudziński's daughter, Barbara, and

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ultimately inherited the shop that later passed to his son. Grandson Jan Andrzej Szaster, pharmacist and physician, who owned two apothecary shops – *The Golden Head* and *The Sun*, both located at the Main Square – was in 1783 nominated the first professor of the newly created Chair of Pharmacy and *Materia Medica* in the Medical School.[29]

Royal favours to apothecaries

An apothecary wishing to open a profitable shop had a few options. He could either try to gain a royal privilege, the right to ennoble, or become a royal apothecary who belonged to the Court (*Apothecarius Regius, aptekarz królewski*).[30] The royal apothecary prepared medicines for the king and his court and supervised medical supplies to the royal pharmacy. Sometimes he accompanied the king during military expeditions helping with organisation of the field hospital.[31] All artisans and merchants working for the royal court were excluded from the municipal authority. Beyond the charges for prepared medicines they received a regular wage and supplements in the form of payments for bread and beer, as well as for oats to feed horses etc. Royal apothecaries usually ran their own pharmacies, displaying on the shelves pharmaceutical jars decorated with royal emblems to attract customers. What is more, they did not have to take the citizenship of the city to open a business, nor pay duties for drugs imported from abroad.[32]

Figure 4. Interior of a 16th-century apothecary's shop in Krakow. On the shelves are pharmaceutical jars decorated with royal emblems. Image from the herbarium Stefan Falimirz (1534). National Library of Poland (Biblioteka Narodowa).

Some apothecaries possessed a *servitoratus* privilege (i.e. court suppliers) given by the king to non-nobles. The servitor position, which came under the jurisdiction of the Crown Marshall's courts, exempted merchants and purveyors from restrictions normally imposed on traders by fraternities and town councils.[33] Apothecaries with *servitoratus* status supplied the court with drugs and spices, fruit and sweets or wine. *Moreover they* obtained a residence and right to trade in any royal city, and sometimes also the exclusive right to open an apothecary shop in the city. One Polish historian aptly wrote 'Servitors *alias* monopolies are a real plague of the trade.'[34] Paolo Secchi, for instance, created servitor by king Sigismund III Vasa in 1625,[35] owned two shops, the Royal Pharmacy in Grodzka Street, (the *main route between the Main Square and the Royal Castle), and the second located in Kazimierz.*[36] He could enjoy all the freedoms and privileges of royal servants.

Historical records confirm that Secchi benefited greatly from the royal privileges and was a very rich man. An inventory carried out after his death in April 1634 shows that both apothecaries shops were very well equipped. The value of the equipment of *Apotheca Regia* was estimated at 3145 złoty, which suggests that it was the biggest pharmacy in the Polish territory at that time.[37] Moreover, he possessed a rich collection of medical books (pharmacopoeias, herbaria, and works of Hippocrates, Galen, Avicenna and Mesue etc.). Similarly, Andrzej Sasinowicz, the royal servitor from 1635, obtained from King Władysław IV Vasa a privilege to open a pharmacy in Krakow and sell drugs without objection or hindrance from anyone. He opened in the Florianska Street (very close to the Main Square, probably in the same year.[38]

Ennoblements of apothecaries

According to the existing laws, all noblemen dealing with trade were stripped of nobility. It is not surprising that some apothecaries of noble birth, after settling in cities, had to use bourgeois titles.[39] One apothecary, Paweł Chawłowski, was mentioned in the privilege of king Sigismund I the Old in 1527 as *nobilis*, but after being recognised as a merchant he was titled with a bourgeois title *famatus*, as well as his daughter (*honesta*).[40] It is also probable that Łukasz Drewno (16th/17th century), an apothecary of Warsaw using the coat of arms *Leliwa*, had to resign from his title.

In 1775 Parliament obliged the newly ennobled to purchase an estate under penalty of nullifying the grant but also annulled all laws banning noblemen from participating in trade.[41] Some old noble families were given new ennoblements. In the diaries of Stanisław Lubomirski (1764-1768) there is a fragment referring to the *Sejm* session:[42]

> As soon as the Speaker of the Crown Confederation, Prince Radziwill began the session, a variety of projects was established, among them also the proposals of indygenats (Naturalisation as a Nobleman) and

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ennoblements of a large number of people without any merits, some of them having only a razor and comb as a merit.

On the other hand, non-noble apothecaries could get the right to use a noble title, for example in recognition of their extraordinary and dedicated service. By the second half of the 16th century new ennoblements were granted by the king until, in 1573 nobles proclaimed an Act, *Plebeiorum Nobilitatio*, depriving the sovereign of his power to make new grants of ennoblement. All applications had to be considered by the lower house of the *Sejm* and approved by the Senate. The only exception to this rule was ennoblement on the battlefield for outstanding bravery. It is not surprising that the *Szlachta* jealously guarded their rights and privileges. However, some apothecaries were recognised as noblemen. For example, the Alanste family, owners of two apothecary shops in Krakow and Płock, who probably came from Venice and first settled in Płock.[43] Jan Alanste had a pharmacy there that supplied the royal court of Sigismund I with medicines and spices. On 1st of August 1530 Charles V Habsburg ennobled him in Augsburg. By 1533 Jan Alanste moved to Krakow and obtained, in 1535, city rights to land and properties. In 1533 he leased, together with his son-in-law, Sebastian Miączyński who had city rights from 1531, part of a house in Grodzka Street for an apothecary shop (so-called 'Płock' Pharmacy). Between 1536 and 1539 they bought a palace in Grodzka Street, where another shop was opened. Miączyński distinguished himself mainly as a military pharmacist, taking part in war campaigns and travels alongside the king. He held an honourable function of the cavalry captain, organising defence of the city. On 16th June 1554 he received in Vilnius *servitoratus* from the king Sigismund Augustus, guaranteeing him many privileges.[44]

The son of Jan Alanste, Mikołaj, the owner of the palace of the Golden Carp at the Main Square, followed in his father's footsteps and came to Krakow in 1543. A few years later, in 1569, Mikołaj, together with his sons and brother, were bestowed the Polish indygenat, that is an act of naturalisation, granted only to foreigners of noble origins after providing a certificate of nobility issued by a foreign court. Mikołaj's daughter, Elżbieta, married a nobleman, Daniel Zaydlic, an apothecary and an alderman in Krakow (*Korzbok* coat of arms). Daniel's son, Mikołaj, took over his father's business after his death. The next owner of the pharmacy was Jan Pernus, nephew of Agnieszka Pernus, wife of Mikołaj. Pernus was a rich nobleman, who also held the office of a royal secretary.

Conclusions

The lack of a guild of apothecaries in Krakow during the Early Modern Era was very attractive to foreign apothecaries, especially during the 16th century. Sometimes this was because of insufficient qualifications and vocational skills in their home places (bunglers). Sometimes, it was for religious or political reasons. 'The religious tolerance of sixteenth-century Poland appears as a truly remarkable phenomenon' wrote W. Weintraub.[45] The multinational Commonwealth offered a safe harbour for the religious dissenters in the era of absolutism and religious strife until, during the course of the 17th and 18th centuries, religious intolerance escalated in Poland. Legislation in 1717 and 1733 debarred protestant and orthodox gentry from the parliament, public office and the higher military ranks, and restricted the freedom of protestant worship. The economic breakdown and political destabilisation in the Commonwealth initiated in the second half of the 17th century is reflected in the decreased number of foreign apothecaries in Krakow as well as their level of affluence.

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1. Davies N. *Heart of Europe. The Past in Poland's Present*. New York: Oxford University Press, 2001: 261.

2. Davies N. *Heart of Europe. The Past in Poland's Present*. New York: Oxford University Press, 2001: 291.

3. The Commonwealth consisted of two states, equal in rights, the Kingdom of Poland (*Korona*) and the Great Duchy of Lithuania; it came into being at the Union of Lublin (1569) as a consequence of the lack of a royal heir and the threat of Muscovite expansion.

4. The contrast between privileges of social classes was visible, especially when the bourgeoisie was strengthening its position in the cities of Western Europe. Foreigners traveling to Poland in the 16th to 18th centuries were amazed at Polish social structure. J. Le Laboureur, who visited Poland in the middle of the 17th century admitted that 'There are no three classes in Poland, because folk don't take part in voting, except for three cities, Krakow for Poland, Vilnius for Lithuania, and Gdansk for Prussia, that have right to vote. All the Government belongs to the Clergy and the Nobles, which are like the Princes of the populace.' Translated from French original: Le Laboureur J. *Histoire et relation du voyage de la royne de Pologne*. Paris: chez Toussainct Quinet, au Palais, sous la montée de la Cour des Aydes, 1648: 105.

5. Bogucka M. Miejsce mieszczanina w społeczeństwie szlacheckim. In Wyczański A (ed). *Społeczeństwo staropolskie. Studia i szkice. Tom I.* Warszawa: PWN, 1976: 185-200.

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8. See also: Grześkowiak-Krwawicz A. *Queen Liberty: the concept of freedom in the Polish-Lithuanian Commonwealth*. Series: Studies in Central European histories. Vol. 56. Leiden: Brill, 2012.

9. Defoe D, Bülbring KD (ed.) *The compleat English gentleman*. London: D. Nutt, 1890: 29-30.

10. Tobiasz M. *Szlachta i możnowładztwo w dawnej Polsce: szkic*. Krakow: Ex libris, 1945: 76.

11. Naruszewicz A. *Wybór poezyj*. Warszawa: Nakład i Druk S.Lewentala, 1882: 26.

12. Rembieliński R and Kuźnicka B. *Historia farmacji*. Warszawa: PZWL, 1987: 252; Głowacki WW. Dawne organizacje zawodowe aptekarzy polskich. *Farmacja Polska* 1964; XX (3-4): 77-79.

13. Głowacki WW. Dawne organizacje zawodowe aptekarzy polskich. *Farmacja Pol* 1964; XX (3-4): 337.

14. Lachs J. *Dawne aptekarstwo krakowskie*. Warszawa: Biblioteka Wiadomości Farmaceutycznych, 1933: 11.

15. Rembieliński R and Kuźnicka B. *Historia farmacji*. Warszawa: PZWL, 1987: 252.

16. Polish cities didn't play an important role in the Polish political scene. Although the burghers could enjoy personal freedom, their authority was limited to the city council. Only city councils of the major cities, like Krakow (1497, 1505), Vilnius (1569), Poznan (1581), Lvov (1588), Warsaw (1588), Kamieniec Podolski (1670), and Lublin (1703) had the same privileges of inviolability like *Szlachta*. They could send deputies to the sessions of the General Sejm, but had only an advisory status, additionally limited to urban issues (from 1565). Uruszczak W. Zasady ustrojowe Rzeczypospolitej Obojga Narodów. *Czas Praw Hist* 2008, LX (2), 125-156.

17. Loosely translated from: Fournier A. *Handel und Verkehr in Ungarn und Polen: Um die Mitte des 18. Jahrhunderts*. Wien: in Commission bei Carl Gerold's Sohn, 1887: 440-441.

18. An exactly analogous situation occurred with a late creation of the guild of drapers. Cloth-manufacturing industry was already well developed in the 15th century, but there are no traces of drapers' guild at that time. Such an organisation was unnecessary, because rich merchants held the most important municipal offices and cared enough about their own interests. Kutrzeba S, Ptaśnik J. Dzieje handlu i kupiectwa krakowskiego. *Rocznik Krakowski* 1912; XIV: 133.

19. Van Beek U. *Democracy under scrutiny: elites, citizens, cultures*. Opladen: Budrich, 2010: 47.

20. Friedrich K. *Citizenship and identity in a multinational commonwealth: Poland-Lithuania in context, 1550-1772*. Leiden: Brill, 2009: 150.

21. Also earlier: *Christophorus Italicus nunc apothecarius in Cracovia* (1398) or *Mathias apothecarius* (Maciej Grosz), the owner of 'dy kleyne apoteke' (*parva apotheca*) at the Main Square from St. Gallen (Switzerland) (1444). Lachs J. *Dawne aptekarstwo krakowskie*. Warszawa: Biblioteka Wiadomości Farmaceutycznych, 1933: 73-74.

22. Due to the lack of basic information concerning the family name, place of origin or duties many of them cannot be assigned to any particular nation. D. Quirini-Popławska, *Działalność Włochów w Polsce w I połowie XVI wieku: na dworze królewskim, w dyplomacji i hierarchii kościelnej*. Krakow: Zakład Narodowy im. Ossolińskich Wyd. PAN, 1973: 9

23. Kazimierz is a suburban town on the other side of the Vistula River. The name of the city came from the King Casimir the Great, who conferred royal privileges on the Jews of Krakow in 1334, guaranteeing them certain rights like freedom of religion or juridical autonomy. When a great fire in 1494 destroyed many parts of the city including the Jewish quarter, the king *John I Albert* settled *Jews* in Kazimierz.

24. Ashkenazi moved to Constantinople, where he displayed great skill in diplomatic affairs as member of the staff of Grand Vizier Mahomet Sakolli, who entrusted him with many delicate commissions.

25. Lachs J. *Dawne aptekarstwo krakowskie*. Warszawa: Biblioteka Wiadomości Farmaceutycznych, 1933: 81; Bałaban M. *Historja Żydów w Krakowie i na Kazimierzu 1304-1868*. Vol. I (1304-1655). Krakow: Nadzieja, 1931: 151-155.

26. Stabrawa A. *Dawne apteki miasta Krakowa od XIV do XVIII wieku*. Vol 1. Krakow: PhD dissertation, Jagiellonian University of Krakow, 1993: 169-170.

27. Nicholas DM. *The Growth of the Medieval City: From Late Antiquity to the Early Fourteenth Century. A History of Urban Society in Europe*. New York: Routledge, 2014: 173.

28. In 1860 LF Karczewski gave an oration during the funeral of Anna Szastrowa (great-granddaughter of Michal): "The family of Szasters was not Polish, but came from France. During unfortunate times, when almost one million French Huguenots migrated to Germany and to Prussia … there was a magnate from Poland, who, coming back from France, met near the border a young boy, nice in appearance. His name was, according to himself, *de Chastres*. The nobleman took the boy with him and raised him taking care of his educational background. … It was impossible to track down his parents during unruly times of religious rioting. His foreign name became Polish and de Chastres was since then called Szaster. The family did not pay attention to the purity of the name, but to the virtue of honour, good reputation and allegiance to the adopted country. French progenitors were, as I suppose, Huguenots – but in Poland the family members were all Catholics." Karczewski LF. *Mowa pogrzebowa miana na nabożeństwie żałobnym dnia 1.V.1860 r. przy zwłokach ś.p. Anny z Szastrów Szastrowej*. Wrocław 1860.

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29. Stabrawa A. Jan Andrzej Szaster (1746–1793). In: Pawłowski M (ed). *Złota Księga Wydziału Farmaceutycznego Uniwersytetu Jagiellońskiego.* Krakow: Księgarnia Akademicka, 2000: 23-34.

30. Krakow remained capital of Poland until 1596, when it was relocated to Warsaw.

31. Bela Z. Herb aptekarza królewskiego Angelo Cabortiego. In Bela Z. *O starożytnych antidotach, złotych pigułkach i innych sprawach związanych z historią farmacji.* Krakow: Wyd. Medycyna Praktyczna, 2013: 559-566.

32. Ibid.

33. Karłowicz J, Niedźwiecki W. *Słownik języka polskiego. Tom VI.* Warszawa: Druk. Gazety Handlowej, 1915:76.

34. Ibid.

35. Central Archives of Historical Records in Warsaw, Metryka Koronna, Ms. 173, p. 292; Stabrawa A. *Dawne apteki miasta Krakowa od XIV do XVIII wieku.* Vol 1. Krakow: PhD dissertation, Jagiellonian University of Krakow, 1993: 101.

36. Lachs J. *Dawne aptekarstwo krakowskie.* Warszawa: Biblioteka Wiadomości Farmaceutycznych, 1933: 115-116.

37. Stabrawa A. *Dawne apteki miasta Krakowa od XIV do XVIII wieku.* Vol 1. Krakow: PhD dissertation, Jagiellonian University of Krakow, 1993: 106.

38. Stabrawa A. *Dawne apteki miasta Krakowa od XIV do XVIII wieku.* Vol 2. Krakow: PhD dissertation, Jagiellonian University of Krakow, 1993: 260-262.

39. Sign used by bourgeois class in the Kingdom of Poland and corresponding to a noble coat of arms was called *gmerk* (also *herbik, signum, signetum, Zeichen, cech, starka*). The word *gmerk* probably came from the phrase *gmeranie*, used as a disparaging term for German speaking citizens of Polish cities. *Gmerk* was a house mark used by merchants, tradesman, artisans and other town burghers serving also as a proprietary and manufactory sign. We can find *gmerk* signs on contracts, last wills, guild documents, tombstones and epitaphs, votive paintings, liturgical vessels and townhouses.

40. Świeżawski E, Wenda K. *Materyjały do dziejów farmacyi w dawnej Polsce. Vol. III.* Warszawa: Nakładem K Wendy, Druk Michała Ziemkiewicza, 1887: 55.

41. Grodziski S. *Obywatelstwo w szlacheckiej Rzeczypospolitej.* Krakow: Nakł. Uniwersytetu Jagiellońskiego, 1963: 97.

42. Lubomirski S, J. Łojek J, *Pod władzą księcia Repnina: ułamki pamiętników i dzienników historycznych (1764-1768).* Warszawa: Pax, 1971.

43. It is interesting that Jan Alanste was once accused of poisoning the dukes of Mazovia, when hosting at their court. Świeżawski E, Wenda K. *Materyjały do dziejów farmacyi w dawnej Polsce. Vol. III.* Warszawa: Nakładem K. Wendy, Druk Michała Ziemkiewicza, 1887: 77.

44. State Archive of Krakow, Scabinalia Cracoviensia, 35: 568; Stabrawa A. *Dawne apteki miasta Krakowa od XIV do XVIII wieku.* Vol 1. Krakow, PhD dissertation, Jagiellonian University of Krakow, 1993: 147-148.

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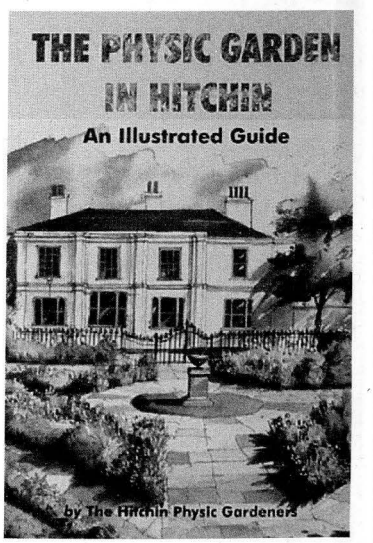
Book review

The Physic Garden in Hitchin: An illustrated guide.

By the Hitchin Physic Gardeners.

Hitchin: Hitchin Historical Society, 2015. Paperback, vi + 140pp.
ISBN 978-0-9926162-2-9. Price £12.95.



This guidebook to the William Ransom Physic Garden describes its setting up 25 years ago by enthusiastic gardeners and historians. Hitchin is closely linked to two firms famous for growing and supplying medicinal and useful herbs. Both had pharmacies in the town which developed into larger manufacturing businesses during the 19th and 20th centuries. The history of William Ransom & Son and its farm and factory is described by Michael Ransom and a former employee. Parks and Llewellyn, founded in the 18th century became famous for their lavender products.

After describing the layout of the garden the main part of the book has over a hundred illustrated monographs on the herbs growing there. For each there is a colour photo, a description of the plant and its uses and appropriate quotations on the history and etymology from Culpeper and a wide range of other sources. This is an interesting guide to medicinal herbs that can be seen in the Hitchin garden (SG6 1EQ).

Ainley Wade

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